## ABSTRACT OF THE DISCLOSURE

Methods and apparatus for an automated system for cross calibration based on data stored by a plant computer and data storage unit or a plant monitoring system. The automated system includes a processor executing software for retrieving data, determining average temperatures, determining deviations, and determining new calibration curve coefficients for deviating instruments. In another embodiment, the processor executes software for loading the historical data, selecting data points, removing deviate data, analyzing the data, reporting the data, and for recalibrating instruments that were determined to be deviating.